Grade 4 Correlation Guide
2016 Science Indiana Academic Standards to 2022 Performance Expectations*

Physical Science	
2016 Indiana Academic Standard	**2022 Performance Expectation**
4.PS.2 Investigate the relationship of the speed of an object to the energy of that object.	**4-PS3-1.** Investigate the relationship of the speed of an object to the energy of that object.
4.PS.5 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**4-PS3-2.** Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.
	4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide.
4.PS.4 Describe and investigate the different ways in which energy can be generated and/or converted from one form of energy to another form of energy.	**4-PS3-4.** Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.
	4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.
	4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.
	4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information.
4.PS.3 Investigate how multiple simple machines work together to perform everyday tasks.	**4-PS2-1** Identify types of simple machines and their uses. Investigate and build simple machines to understand how they are used.
	4-PS2-2 Investigate how multiple simple machines work together to perform everyday tasks.

Life Science	
2016 Indiana Academic Standard	**2022 Performance Expectation**
3.LS.3 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. **4.LS.3** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction in a different ecosystems.	**4-LS1-1.** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
5.LS.3 Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	**4-LS1-2.** Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

Earth and Space Science	
2016 Indiana Academic Standard	**2022 Performance Expectation**
3.ESS.4 Determine how fossils are formed, discovered, layered over time, and used to provide evidence of the organisms and the environments in which they lived long ago.	**4.ESS1-1.** Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.
4.ESS.3 Analyze and interpret data from maps to describe patterns of Earth's features.	**4-ESS2-1.** Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
	4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.
4.ESS.2 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	**4-ESS3-1.** Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.
4.ESS.4 Develop solutions that could be implemented to reduce the impact of humans	**4-ESS3-2.** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

on the natural environment and the natural environment on humans.	

Engineering Design	
2016 Indiana Academic Standard	**2022 Performance Expectation**
3-5.E.1 Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.	**3-5.ETS1-1.** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
3-5.E.2 Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	**3-5.ETS1-2.** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
3-5.E.3 Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	**3-5.ETS1-3.** Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

*Performance expectations are three dimensional. All three dimensions (Disciplinary Core Ideas, Science and Engineering Practices, and Crosscutting Concepts) must be included as part of effective instruction.

For more information, see the Indiana Department of Education's Indiana Academic Standards webpage or contact the Office of Teaching and Learning.